



# IISC GPU BOOTCAMP

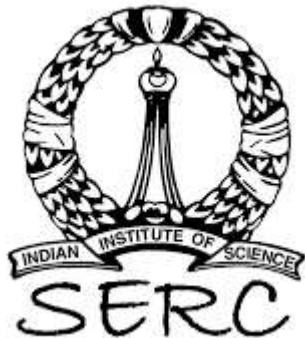
2<sup>nd</sup> - 3<sup>rd</sup> May 2019

GPU Bootcamp is an exciting and unique way for scientists and researchers to learn the skills needed to **start quickly accelerating codes** on GPUs.

This two-day event will introduce you to available GPU libraries, programming models, and platforms where you will learn the basics of GPU programming.

You will also **experience extensive hands-on collaboration based on a real-life code** using the OpenACC programming model, learn CUDA fundamentals and **discuss porting strategies of in-house codes**.

GPU Bootcamp is organized collaboratively by [OpenACC.org](https://openacc.org), [Amazon Web Services](https://aws.amazon.com), [NVIDIA](https://www.nvidia.com), and [Linux Academy](https://linuxacademy.com).



# SCHEDULE

## Day 1: Learn Fundamentals

- Introduction to Heterogeneous Computing
  - Why Hybrid Architecture?
  - Heterogeneous Programming Models
- CPU vs. GPU Architecture
- Ways to GPGPU Programming
  - Libraries vs. Directive-based vs. Languages
- Hands-on Directive-based Programming
  - Introduction to OpenACC
  - Directive-based Programming: Hands-on labs
- Hands-on CUDA Languages
  - Introduction to CUDA C API
  - Introduction to CUDA Memory Hierarchy
  - CUDA Programming: Hands-on lab

## Day 2: Application Porting

- Mini-Application
  - Get ready for fun competition
  - Hands-on Session: Real-world Mini-application
- IISC In-House Code porting \*
  - Discuss Strategy for Porting In-house Applications
  - Porting codes under Guidance of Mentor

\* In-House Code porting is optional and only for participants who would like to get guidance on porting and optimize own codes

# TIMELINE

- 11 April ● Submission open for participations.
- 19 April ● Registration closes
- 22 April ● Participants selected for the In-house code porting on the second day afternoon will receive notification
- 2 May ● Day 1 Bootcamp: Fundamentals of GPU training
- 3 May ● Day 2: Application porting and competition

